

## ABSTRACT OF THE DISCLOSURE

The invention relates to a method and a system for determining hysteresis of a process device in a process environment. The process comprises collecting (50) second-level sample data  $y_s$  and  $u_s$  from control and measurement signals  $u$  and  $y$  of a control circuit. Minute mean values  $y(\min)$  and  $u(\min)$ , which are stored in a database (52), are calculated from these second-level measurement values. The pairs suitable for hysteresis calculation are selected from the minute-level sample pairs  $u_m$  and  $y_m$  according to a certain procedure. The pairs are also divided into two groups. Unsuitable pairs are rejected (57). Two characteristic curves (54) are calculated from the selected pairs  $(u_m, y_m)$  for hysteresis calculation (55). The calculation (55) also includes a routine which evaluates the reliability of the identified hysteresis.